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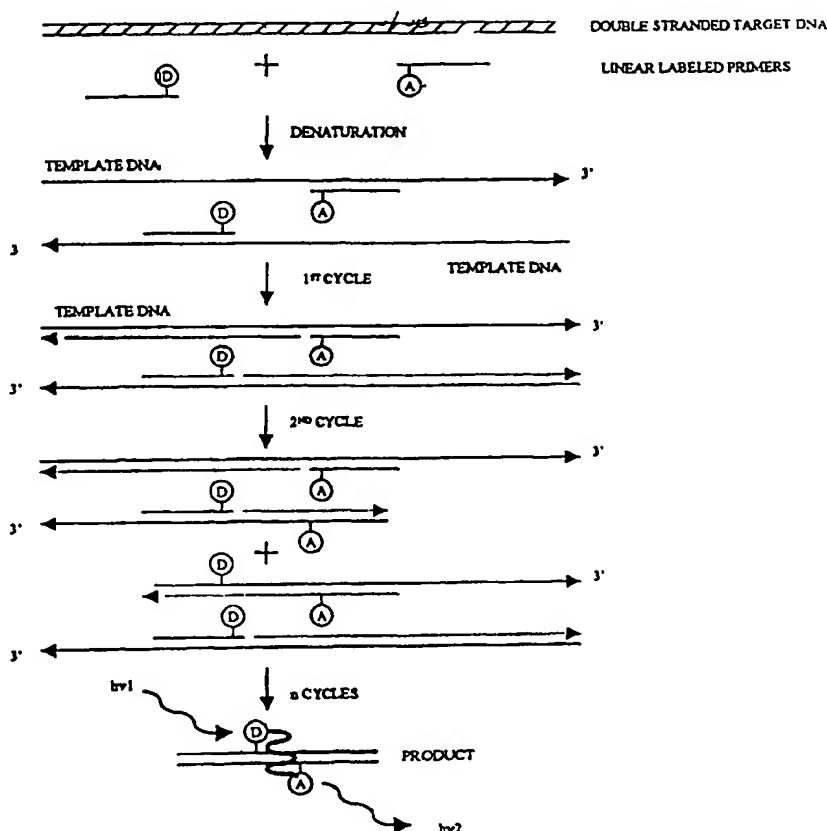
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(54) Title: **MET/FRET BASED METHOD OF TARGET NUCLEIC ACID DETECTION WHEREBY THE DONOR/ACCEPTOR MOIETIES ARE ON COMPLEMENTARY STRANDS**



(57) Abstract: Disclosure of a method for the detection and quantitation of polynucleotide sequences in a sample of biological or non-biological material through target polynucleotide sequence amplification whereby MET/FRET occurs between a donor moiety and an acceptor moiety provided separately on at least two separate oligonucleotides that are part of the opposite complementary strands of a nucleic acid segment.

WO 2003/102239 A3



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INTERNATIONAL SEARCH REPORT

International Application No.
PCT/IL 99/00204

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 866 336 A (NAZARENKO IRINA A ET AL) 2 February 1999 (1999-02-02) column 9, lines 53-60 column 25, line 47 - column 26, line 12 column 4, lines 35-42 column 8, lines 26-38 column 19, line 22 figure 7 column 33, lines 12-31	1-5, 8-50, 52-61
X	US 6 287 781 B1 (LEE MARTIN ALAN ET AL) 11 September 2001 (2001-09-11) claim 21; figure 1	51, 52
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	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the International search

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INTERNATIONAL SEARCH REPORT

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PCT/IN US/00204

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 140 054 A (WITTEW CARL T ET AL) 31 October 2000 (2000-10-31) -----	
A	MORRISON L E ET AL: "Solution-phase detection of polynucleotides using interacting fluorescent labels and competitive hybridization" ANALYTICAL BIOCHEMISTRY, ORLANDO, FL, US, vol. 183, no. 2, December 1989 (1989-12), pages 231-244, XP002113097 ISSN: 0003-2697 -----	
A	EP 0 232 967 A (AMOCO CORP) 19 August 1987 (1987-08-19) -----	
A	TYAGI S ET AL: "MOLECULAR BEACONS: PROBES THAT FLUORESC UPON HYBRIDIZATION" BIO/TECHNOLOGY, NATURE PUBLISHING CO. NEW YORK, US, vol. 14, March 1996 (1996-03), pages 303-308, XP002926498 ISSN: 0733-222X -----	
A	US 6 103 476 A (LIZARDI PAUL M ET AL) 15 August 2000 (2000-08-15) -----	
A	MURPHY C J ET AL: "LONG-RANGE PHOTOINDUCED ELECTRON TRANSFER THROUGH A DNA HELIX" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 262, 12 November 1993 (1993-11-12), pages 1025-1029, XP002041920 ISSN: 0036-8075 -----	

INTERNATIONAL SEARCH REPORT

Inte Application No.
PCT/IN 03/00204

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 62
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/IN 03 00204

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 62

Claim 62 refers to a method, a kit used for the same and its process of manufacture substantially as described in the application and illustrated in the examples and figures and many modifications thereof. The subject-matter of the said claim and the scope of its protection is thus so unclear that no meaningful search can be carried out (Art 6 PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

International patent family members

International Application No.

PCT/IN 03/0204

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